

MARINE REVIEW.

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CLEVELAND, O., MAY 17, 1894.

No. 20.

A Large Auxiliary Steam Yacht.

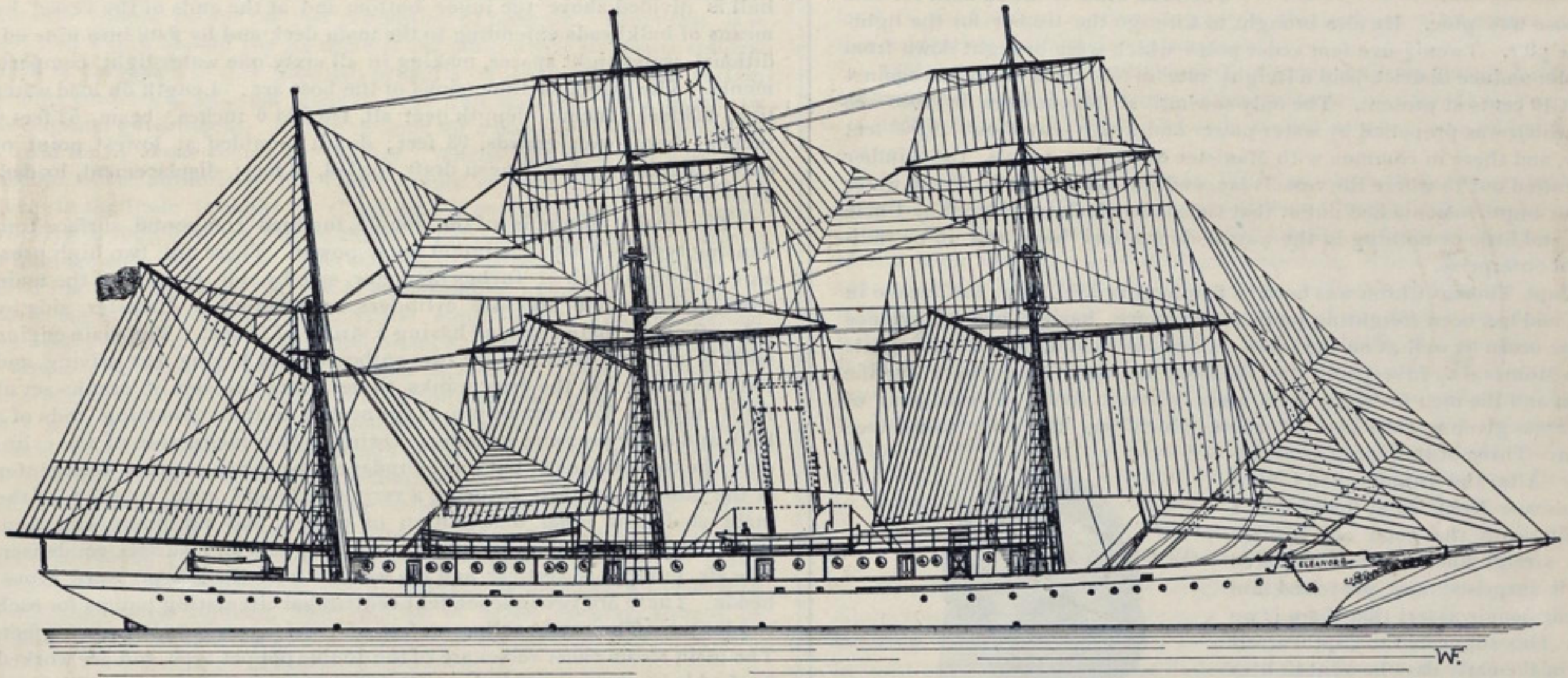
An auxiliary steam yacht of very large sail area is shown in the engraving on this page. The boat is the Eleanor, built by the Bath (Me.) Iron Works for Wm. A. Slater of Norwich, Conn. The vessel is barque-rigged, carrying 10,935 square feet of sail, and she will be manned by a crew of fifty-five, all told. Seaworthiness and the feature of great sail are the principal ends sought in the ship, as it is the intention of her owner to take a two-years' cruise around the world. The boat is 231 feet over all, 185 feet keel, 32 feet beam and 17 feet 5 inches depth of hold. Her mean draft is 13 feet and the displacement 1,136 tons. She is constructed of steel throughout, with water ballast tanks forming a double bottom forward and aft of the machinery space. The propelling power consists of a vertical inverted direct acting triple expansion engine with cylinders 18, 28 and 45 inches diameter by 30 inches stroke. Steam is supplied by two steel Scotch boilers, each 12 feet 6½ inches long and 12 feet 5 inches diameter. The total grate surface is 120 square feet, and the working pressure 165 pounds. A complete electric light plant, steam windlass and steam steerer, Tyzack patent stockless anchors and refrigerating machinery are among other modern features of equipment in the boat.

Capt. Stone's Reply to the Inspectors.

Editor MARINE REVIEW:—In your issue of the 10th inst., is published the answer of Mr. Curtis, acting secretary of the treasury, to a letter from

formed from the apparent direction from which a signal was heard during a fog was taken with the greatest risk. There is nothing new in this statement. It is as old as navigation itself. But it is not a matter requiring discussion at this time, nor at any other time within my knowledge. With this self-evident fact at hand, however, we are asking what possible benefit can be derived from forbidding two steamers meeting in a fog the privilege of aiding in a successful passage by indicating to each other, by a passing signal, the side on which each steamer intends to pass. The position of a steamer can certainly not be rendered more deceptive by sounding a passing signal than by a fog signal.

The acting secretary's letter also refers to several collisions which are attributed to the misuse of passing signals. One of these collisions occurred in clear weather, and many more of the same kind could be named. Would the secretary advocate doing away with passing signals because mistakes have occurred in clear weather? When the rule is violated it is not the fault of the rule but of some person or thing. We, as practical seamen, are arguing for rules of safety. We have no other motive in view, nor do we attribute any other to our law makers, but to illustrate this matter I may be pardoned in remarking that Horace Greely was a man of great mind, probably one of the greatest this country ever produced. He was a successful journalist and could write fluently about farming, but I question whether he was ever able to hitch a team to a plough or turn one passable-looking furrow.



AUXILIARY STEAM YACHT ELEANOR—BUILT BY BATH IRON WORKS, BATH, ME.

Capt. Holmes and myself regarding the resolution of the board of supervising inspectors of steam vessels on the subject of the use of passing signals when vessels are not in sight of each other, and I wish to reply to the same through your columns, as your paper seems to be the proper channel through which the subject will get an impartial airing among marine men. In the acting secretary's reply we are quoted as admitting that the sound of a steam whistle in a fog is more often deceptive than correct, which quotation is incorrect. We did not use the term "more often deceptive than correct," but we did admit that the locality can not be determined positively from the sound of a whistle. But taking the argument of the supervising inspector-general, as transmitted through the letter of the acting secretary, and quoting his words we find the following:

"The sound of a steam whistle in a fog is proven by experience to be more often deceptive than correct." If this be true, then why in the name of common sense is this deceptive rule made obligatory. If we are more apt to be deceived than correct in locating another steamer (approximately) then why not advocate, as a matter of safety, an amendment obliging us to steer for the apparent locality from which the sound comes.

In a card in one of the local papers, Supervising Inspector Westcott of Detroit refers to the International Marine Conference as an assemblage made up of the most skillful navigators in the world, and says that this conference declared that any movement made in accordance with an idea

I have talked with a great number of masters and several attorneys regarding the rules of the board at sea, and not one of them can place the interpretation upon these rules that is expressed in the late circular to masters and pilots. I will admit that sailors are not among the most scholarly of men, and hence the greater necessity for the wording of rules by which they are to be governed in a manner full and comprehensive.

Cleveland, O., May 15, 1894.

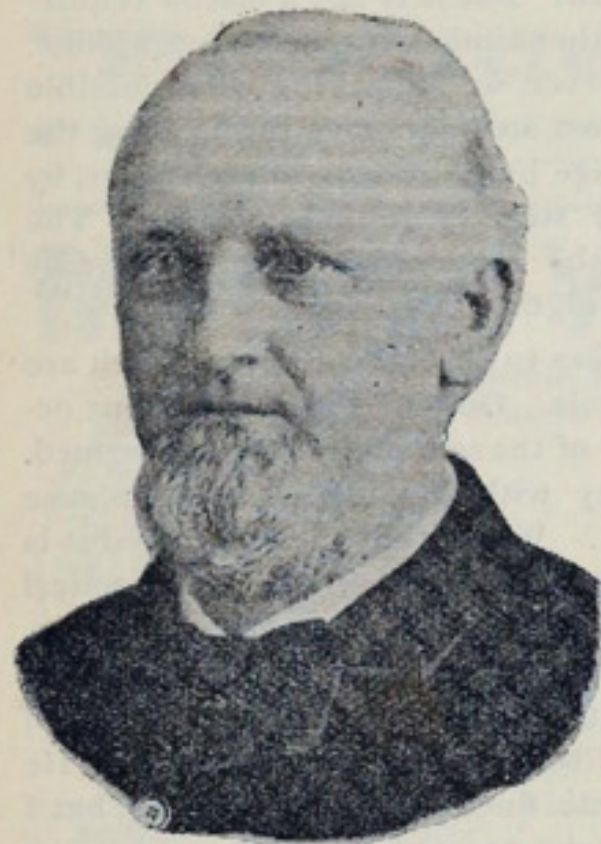
J. STONE.

The Cleveland Yachts.

Extensive trips have already been planned for all three of the large steam yachts owned in Cleveland. Mr. H. M. Hanna says he will begin fitting out his yacht, the Comanche, shortly, and after making a few trips with friends on Lake Erie she will depart early in June for the Gulf of St. Lawrence and famous fishing banks of that vicinity. Congressman W. J. White's yacht Say When will go to Georgian bay, and Mr. Homer Wade will undertake a very long voyage in his Wadena, which was lengthened during the winter in New York. The Wadena will go to Japan and will there be joined by her owner, who will follow by rail to San Francisco and thence to Yokohama by the Pacific Mail Line. After a cruise in Japanese waters Mr. Wade will return on the yacht via the Suez and Mediterranean. He will be accompanied by his family and a physician.

A Pair of Captains.

Novelists from way back have told us about the "gruff old captain," but very likely not one in a hundred of them ever came in contact with a captain. Life on the water imparts to an individual a frankness and heartiness of manner that few men possess who live in our cities and make it a study how they can live by gobbling the nickels of other people. A pleasant hour was spent the other day in the office of the Marinette Barge Line Company, Twenty-second street, Chicago. The object of the visit was to get a "story," as the newspaper reporters call it, out of Capt. J. C. Perrett, superintendent of the line, but fortunately Capt. Chron was also



CAPT. J. C. PERRETT.

in the office, and so we had a three-cornered chat. These two captains remind one of Damon and Pythias. One speaks well of the other behind his back, and the whole of humanity is not built that way. Together in 1857 they joined the Cleveland Masonic lodge in Chicago, and have been intimate friends ever since. They have literally gone hand in hand for nearly forty years, and during many of these years have been closely connected in a business way. Capt. Perrett was born in Somersetshire, England, in 1833, and began his career on the great lakes in 1852. It was regarded as a good-sized vessel in those days that could carry 150,000 feet of lumber. In 1859, he brought the first paving material to Chicago, which was oak, and it was laid on Wells street. The next kind of wood used for this

purpose was pine. He also brought to Chicago the timber for the light-house pier. Twenty-five-foot cedar poles which were brought down from the Menominee district, paid a freight rate of 50 cents each as against about 10 cents at present. The only saw mill at Menominee in 1853 was one which was propelled by water power and which cut about 20,000 feet a day, and there in common with Manistee and other points, the lumber was rafted out to where the vessels lay, and was then loaded. Fresh water harbor improvements had not at that time been much considered by Uncle Sam, and little or nothing in the way of docks had been put in by individual enterprise.

Capt. Thomas Chron was born in Scotland in 1831, came to Chicago in 1849, and has been freighting lumber ever since, having had experience on the ocean as well as on the lakes. Once his vessel, loaded with deals from Montreal to Liverpool, was disabled on the voyage by a terrific storm and the men for eight days were without food. A wineglass of water was given to each man at noon, which was the only sustenance taken. Three of the crew went insane. After the captain had told of the escape from what looked like certain death, the good old Scotchman straightened up and declared that it surprised and provoked him to hear people assert that there is no God. This suggested to Capt. Perrett that in the early days he went to hear an infidel lecture in Racine. The man took his short human sight for the limit of possibilities and denied the existence of a supreme being. At the close of the lecture permission was granted to any one present to reply, or to ask questions, when a man in the audience arose and said: "We read in the good book that the fool hath said in his heart there is no God, but this—fool doesn't hesitate to say it right out."

Capt. Chron freighted lumber out of the Saginaw valley when there was no East Saginaw and Bay City, and not much else except malaria and mosquitoes. For nineteen successive seasons he carried lumber to Chicago for the Sheriff interests and has never lost a cargo. Twelve years ago he took command of the J. C. Perrett and has held that position ever since. Every year of the twelve he has traveled on this boat at least 30,000 miles, making on an average fifty-seven trips during the season to Menominee, the distance of the round trip being 560 miles. Without much doubt he has freighted more lumber than any other man living.

The Marinette Barge Line was organized twenty-one years ago and during its existence freighted 2,000,000,000 feet of lumber to Chicago,



CAPT. CHRON.

Not one of its barges was ever insured; neither was there any insurance on the lumber shipped in them by their owners. Just as the line had obtained its majority it ceased to exist. The season of 1893 was its last. Some of the barges have been sold. What will become of the tug Perrett is not definitely known; possibly she may go into Lake Huron waters to tow logs. Now that Capt. Chron will tread the deck of the Perrett no longer, to what he will give his attention he does not tell. Capt. Perrett will not seek employment, but live on the means that a life of sobriety and industry has brought him. He declares that he believes that thus far during life he has been one of the happiest men that ever lived.—Salma-gundi in Northwestern Lumberman.

New Fall River Line Steamer Priscilla.

Probably the largest and costliest side-wheel steamer in the world, is the new Fall River Line boat Priscilla, which is about ready to begin regular trips between New York, Newport and Fall River. The sound boats running out of New York have long been noted for great size, speed and elegance, but in all respects this latest addition to the fleet surpasses her predecessors. Her cost is put down at \$1,500,000, and like her sister-ship, the Puritan, from which she differs little in outward appearance, she is, with deck rising above deck, a many-storied marine edifice. She is 20 feet longer than the Puritan and differs from her principally otherwise in having double inclined compound engines instead of compound beam engines.

The contract for the Priscilla complete was given to the W. & A. Fletcher Company, Hoboken, N. J., the builders of the machinery and boilers, and they sublet the various contracts for the hull, joiner work, painting and decorating, plumbing, etc. The hull was built by the Delaware River Iron Ship Building and Engine Works, Chester, Pa., of steel, on the double hull, longitudinal cellular system, with a length of double bottom of 340 feet, having in all 52 water-tight compartments; besides which the hull is divided above the inner bottom and at the ends of the vessel by means of bulkheads extending to the main deck and by flats into nine additional water-tight spaces, making in all sixty-one water-tight compartments. The principal dimensions of the boat are: Length on load water line, 423 feet 6 inches; length over all, 440 feet 6 inches; beam, 52 feet 6 inches; beam over guards, 93 feet; depth moulded at lowest point of sheer, 20 feet 6 inches; mean draft, loaded, 13 feet; displacement, loaded, 5,030 tons.

The main engine is of the double, inclined compound surface-condensing type, of 8,500 maximum horse power. There are two high pressure cylinders, each 51 inches diameter, side by side, forward of the main shaft, and two low pressure cylinders, each 95 inches diameter, side by side, aft of the main shaft, all having a stroke of 11 feet. The main engine shaft is in three sections, the two outboard ones having the driving, and the center section the drag cranks, there being two sets of cranks set at right angles. Each crank-pin is connected to the connecting rods of a high and a low pressure cylinder. Owing to the inclination of the cylinders, the connections of but one cylinder can be thrown upon a dead center at the same time, thus insuring a very steady and even rotation of the main shafts, an equal distribution of power, and minimum vibration. Each low pressure cylinder has its own air pump and surface-condenser. The air pumps are vertical and are worked from the low pressure cross-heads. There are two independent centrifugal circulating pumps for each condenser. The total cooling surface of condensers is 16,000 square feet. The main steam chest valves are of the double poppet type, and are worked by double eccentrics and links. High pressure cylinders have adjustable drop cut-offs; low pressure cylinders fixed Stevens' cut-offs. The pumps were manufactured by the Geo. F. Blake Manufacturing Company of New York.

The paddle wheels are of the feathering type, 35 feet in diameter outside of the buckets. There are thirteen curved steel buckets in each wheel, each bucket being 5 feet deep by 14 feet wide.

The main boilers, ten in number, are of the single-ended Scotch type, and were built for a maximum steam pressure of 150 pounds. This is far in excess of what will be required for the usual business of the steamer, but is advantageous in permitting a large range of pressure. Each boiler is fourteen feet mean diameter by 14 feet 6 inches in length and contains three corrugated furnaces from the Continental Iron Works, N. Y., each 45½ inches diameter, and 184 Serves' patent ribbed tubes 3½ inches diameter. The boilers are fitted with both natural and forced draft under grates. The forced draft is supplied by two large Sturtevant fans driven by independent engines. These steam fans being placed in the main engine department, serve also to ventilate the engine room. The total grate surface of boilers is 850 square feet; total heating surface 35,400 square feet.

Mr. Stanley B. Smith of Detroit, who was in Cleveland Tuesday, says his firm has plenty of coal at Lorain for all up-bound steamers, and at its Detroit river dock will continue to take care of down-bound boats so that they can reach port.

Extremes in Taxing Ships.

At least twenty boats owned and managed in the Cleveland customs district have, within the past few weeks, been removed, as far as matters of registration and official documents are concerned to districts in Michigan and other lake states, on account of the persistent efforts of county authorities to collect taxes from owners of partial interests in such vessels, who are not residents of the city or county, and many of whom are not residents of the state. The fact, also, that several boats have been attached by the sheriff and delayed in port, on account of law suits begun to collect such taxes, has caused a large number of owners to avoid having their boats put into Cleveland even for fuel, when they can possibly avoid it, as it is expected that similar proceedings will be begun against all vessels on which part owners residing in other places have not paid taxes in Cleveland, whether such taxes were paid elsewhere or not. Of all the burdens put upon vessel property, this latest move of the Cleveland authorities is the worst. That it will react to the disadvantage of the community, there is no question, as shown by the large number of removals already made to other districts, and with these removals there is, of course, the loss of taxes that have been paid by managing owners, who as a rule own a very large part of the ship which they control. But a city attorney has made a ruling that permits a county treasurer, who is about to leave office, to grab all he can lay hands on in the way of fees before going, and the community suffers accordingly from a very short-sighted policy. While New York and other Atlantic coast states seeking a foreign trade are exempting from taxation, not only the vessels engaged in such trade, but the corporations operating them and the earnings of such corporations, the municipal authorities in Cleveland are driving away from the city a trade that is equally valuable. The policy of state and county authorities in different parts of the lakes on this matter of taxation of vessels is severely criticized in places where the subject is understood. The New York Maritime Register referring to it says:

"The proposition has been often demonstrated that no form of property should escape its just proportion of taxation. From this it is held that a ship should pay its share at the place where its owner resides. But it is forgotten in this plea that property is taxed to pay for certain benefits conferred, and that none is conferred upon shipping except by the national government. Anything done for a vessel by local authorities is paid for by some charge or another. Where this does not exist, the wisdom of the authorities has found ample compensation for benefits given in the trade brought by shipping. If anybody should tax vessel property it should be the United States. This they do in a slight degree in tonnage and other taxes. That they do not increase them is due to the belief that the merchant navy is of a semi-public character bringing so much more to a nation than business alone—power and commercial supremacy—that it is of national importance to strengthen it even though it may not be taxed as heavily as other industries. This, however, is a question of national character. It is not one of local issue. Some states have adopted the wise course of abolishing taxation of vessel property. Others have not done this. Earnings of vessel property are fit subjects for taxation, but beyond this local authorities should not go. The benefits not only to the country at large, but locally to special trades and industries here and there over the land, from the building up and growth of a large merchant marine are so many and great, and yet depend so much upon making our shipping as free of burdens as the foreign rivals with which they must contend, that taxation of vessel property should be abolished in local budgets."

What Critics are Saying of the North West.

Now that the preliminary trial trips of the Northern Line passenger steamer North West leave practically no question as to the boat making twenty miles an hour in regular service, the gossips have turned to discussing two other subjects pertaining to the boat. One has reference to excessive draft causing difficulties at the St. Mary's Falls canal lock, and the other pertains to the question of commercial success in the undertaking. It would seem that the matter of draft, as well as speed, is fully disposed of in the boat as she now appears. In both of her trials during the past ten days she has had in her coal bunkers nearly 400 tons more fuel than she will have upon arrival at the canal on regular trips. Other weights, even to passengers, have been fully equal to what they will be in regular service, and even with the excessive fuel there would be no difficulty in passing through the canal on the present stage of water. In fact, the present canal draft would admit of a few inches being spared in the draft of the boat under trim suitable to passage. As regards the probability of the stage of water at the Sault often ranging as low as 14 feet or a trifle less, it can be said that with allowance for all weights necessary on the ship she has been trimmed to 13 feet 10 inches.

Of course, anything that is said on the other subject, that of doubt regarding commercial success with the ships, is not prompted by ill-feeling. In all parts of the lakes and among men in all branches of the lake business the enterprise of the managers of the Northern company in building such boats is commended, but on every hand the question is

asked: Will these boats, the cost of the first of which is probably nearer a million dollars than any other price that has been put upon her, find passengers enough in four months of a season to bring back any return on the investment? The only answer to this is that the men who are building them seem to have no doubt on this score. They have repeatedly expressed confidence in the matter, and some of the figures they quote regarding the number of passengers necessary to make the boats self-sustaining would be surprising to outsiders. Their judgment is undoubtedly as good as that of anyone connected with the transportation business of the country. Mr. John Gordon was connected with the passenger business of Lake Superior in early manhood, and almost his entire life has been a study, in a practical way, of the growth of the lake region and the northwestern country beyond it. If his anticipations are realized, passenger traffic on the lakes will be given an impetus heretofore impossible, on account of poor accommodations given in boats running to Lake Superior. It is expected, of course, that the boats will be a source of revenue for the Great Northern Railway, more so than money-makers in themselves, and in this connection Mr. H. M. Hanna, president of the Globe Iron Works Company, remarked on the trial trip last week that if they never made a dollar they were already worth \$500,000 to the railway company in the amount of free advertising that had been given the Great Northern route since the work of construction had begun. Pictures of them in hotels and public places were almost as numerous in London and New York, he said, as they were in Cleveland and Buffalo.

Lake Vessels that went to Sea in Years Past.

Capt. Charles Gale of Sombra, Ont., who is among the oldest of lake vessel masters now living, sends us the following notes about vessels that went to sea from the lakes from 1847 to 1858:

1847.—Brigantine Duke of Athol, 320 tons, built by Robert Steed of Port Sarnia, Ont.; was afterward sold in Scotland.

1849.—Brig Eureka, 350 tons, and Onunga, 270 tons, both from Cleveland, O., for California. Owners were in this case, as in all others, given free navigation by Canadian government.

1856.—Schooner Dean Richmond, 343 tons, built by Quayle & Martin of Cleveland; loaded with wheat and commanded by Capt. D. C. Pearce.

1857.—Schooner Dean Richmond, second voyage; was sold and did not return.

1858.—Brigantine C. J. Kershaw, 350 tons, Capt. D. C. Pearce, built by Quayle & Martin of Cleveland, went out from Chicago with staves; barkentine D. C. Pearce, 350 tons, Capt. Kidd, built and owned by Quayle & Martin, took staves to Liverpool and returned; schooner D. B. Sexton, 340 tons, Capt. T. A. Burke, built by Quayle & Martin and owned by T. P. Handy of Cleveland, took staves to London and was sold there; schooner Ralph H. Harmon, 338 tons, owned by T. P. Handy of Cleveland, took 88,000 staves to Liverpool and returned; schooner John F. Warner, 343 tons, Capt. Charles Gale, also built by Quayle & Martin and owned by T. P. Handy, took 90,000 staves to Greenock, Scotland, and returned in eighty-one days, from time of leaving, with 381 tons of pig iron; schooner Col. Cook, Capt. Malott, took cargo of black walnut lumber from Detroit to Liverpool, and was wrecked on Anticosta island upon return.

Immense Boilers.

Two Scotch boilers for the freight steamer building at the yard of the Globe Iron Works Company are now well under way, and the shell plates entering into their construction are objects of considerable interest. On account of the great size of the boilers, 16 feet diameter by 13 feet 3 inches long, the plate is of $1\frac{1}{8}$ inches thickness. The sheets are about 7 feet by 18 feet 2 inches and weigh 7,300 to 7,400 pounds. They were made by the Carbon Steel Company of Pittsburg, represented on the lakes by Condit, Fuller & Co. of Cleveland. These boilers are the largest ever constructed in this part of the country. There will be but two of them in the new freight boat, as against three of smaller size in the Minnesota line steamers Maritana and Mariposa, the engines of which are about the same size as those intended for this latest Globe steamer.

Publications.

Engravings in part 11 of the "Book of the Fair," published by the Bancroft Company, Chicago, are fully equal to the high class of work in this line that attracted so much attention in the first numbers.

"The Kite as a Life-Saver at Sea," is the title of an article by J. Woodbridge Davis, in the Engineering Magazine (New York). Mr. Davis has made a study of the use of the kite for the purpose of connecting a vessel by a life line with the shore, and the results of experiments are given in the article, which he has had reprinted in pamphlet form for distribution.

Richard P. Joy of Detroit, Mich., who has written a number of articles of late against free ships, is still engaged from a patriotic point of view, in distributing literature on the subject. A few months ago, he prepared a pamphlet entitled "Side Lights on the Fithian Free Ship Bill," and the demand for it has been so great as to necessitate republication of it.

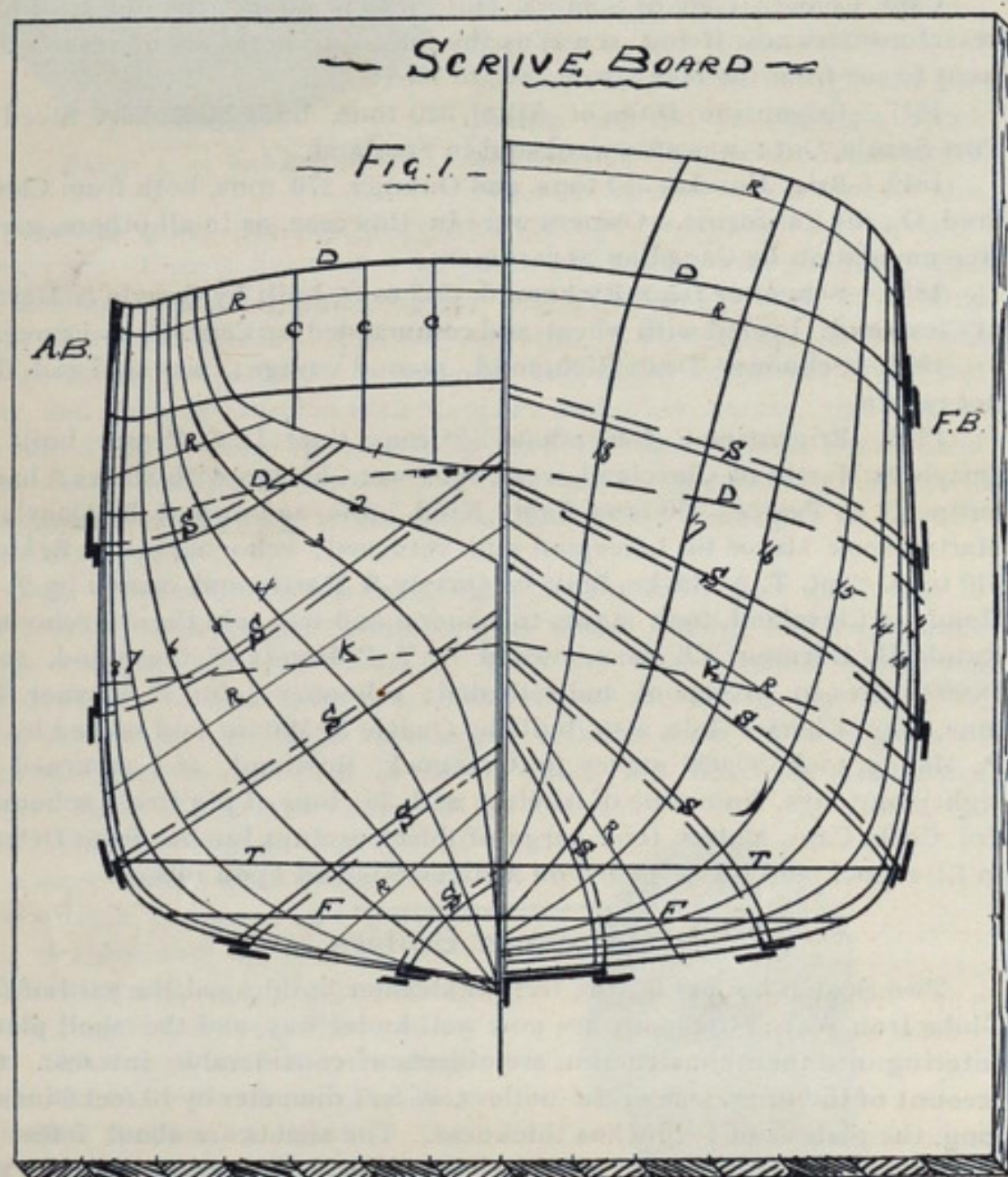
Steel Ship Construction.

THE SCRIVE BOARD AND MOLD SYSTEM OF FRAMING—PRACTICE HERE AND IN OTHER SHIP BUILDING DISTRICTS.

(By a Practical Ship Builder.)

In taking up this subject I do not want to have it appear that I am desirous of criticising methods followed in American ship yards. There is much to commend in the practice of ship builders here, but I do not think that the mold system of framing, with the great expense attending it, is among the commendable features; neither do I consider it a mark of progress in American ship yards.

The method of framing a vessel in this country differs very much from that followed in ship yards on the Clyde and in other European districts. In this country molds are made from lines faired up on the mold-loft floor, as seen by Fig. 2, while most European ship yards use the scrive board shown in Fig. 1. The lines shown on the scrive board are simply transferred from the mold loft upon battens, half inch square, and scratched in on this floor, which is made of seasoned deals, secured edge to edge, the edges being close-jointed and the board being large enough to receive a copy of the fore and after bodies of a vessel to full size. After the lines are transferred from the mold loft to the scrive board, the frame angles are marked for punching, the punching of the frame angles being the first operation in the framing of a vessel on the scrive board system. This is done by bending a batten half inch by quarter inch round the curved lines, 1, 2, 3, etc., and copying upon it the plate landings marked s,



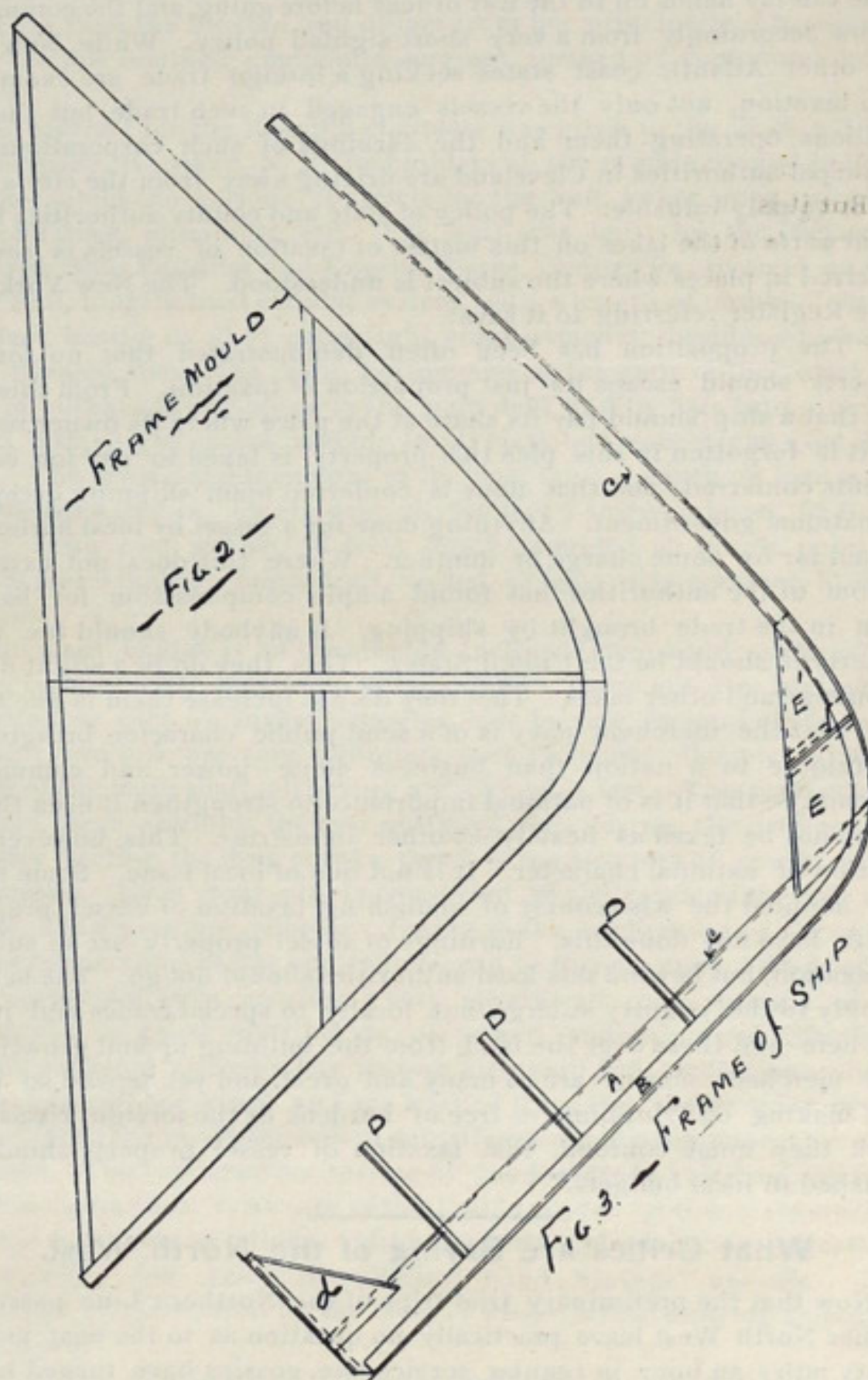
the holes being left unpunched in way of landings until the plates are in place. As the frame angle bar stretches in the bending, an allowance is made for this when marking the frame angle, so that the holes will be in position and to avoid having a space greater than eight or nine diameters between the lap holes and the others.

Several frames being punched, the frame bender prepares his sets, which are of flat iron $1\frac{1}{4}'' \times \frac{3}{8}''$ thick. These sets are bent to the curves, 1, 2, 3, etc., on the scrive board and transferred to the slab, where they are laid down and a chalk line drawn in the width of the frame angle from the set iron. The set is then altered to this lesser curve and sprung inward, to allow for the frame losing its curvature in cooling, as seen by Fig. 4, in which a b is the set and A B is the frame angle bar after the dogs are removed from it. The difference shown between the set and the frame angle is the spring necessary to secure a curve, so that the frame angle will remain to the shape and need no second handling. To the same set, but sprung the other way, the reverse frame angle c, Fig. 3, is bent.

In beveling, machinery is used for the frame angles at the ends of the ship, where the beveling is great, the other frames being beveled after the frame is bent, and it has been something of a surprise to me that even with the use of the mold system no machinery is used here for end frames—at least I have seen none on the lakes. It would seem, however,

that a saving of both time and cost might be made if advantage was taken of machinery, as the following extract from one of S. P. Thearle's latest works on ship building would indicate:

"Among the many useful applications of machinery to the processes involved in iron ship building, that of the beveling machine is not the least ingenious or valuable. The machine for this purpose, which is now being largely used, was invented by a Scotch workman named Arthur, and perfected in its present form so recently as the year 1884. The angle bars as they leave the furnace are brought under the influence of a revolving vertical roller and a bevel wheel roller, the latter being so arranged that it can revolve at all the varying angles required for the beveling of an angle bar. The bevelings are taken at equi-distant spots—say 4 feet apart—and a dial shows when each spot comes to the roller. At the same time a pointer indicates on a bevel board the beveling which is being given at any moment to the angle bar. The apparatus is under easy control, and with it an angle bar can be beveled as required throughout its entire length, the necessary bevelings at each beveling spot having been previously set off upon the bevel dial of the machine. The great advantage of this machine is found in the quality of the work which it produces, the beveled flanges being flat and entirely free from hollowness and inequalities which are inseparable from the ordinary process of beveling.

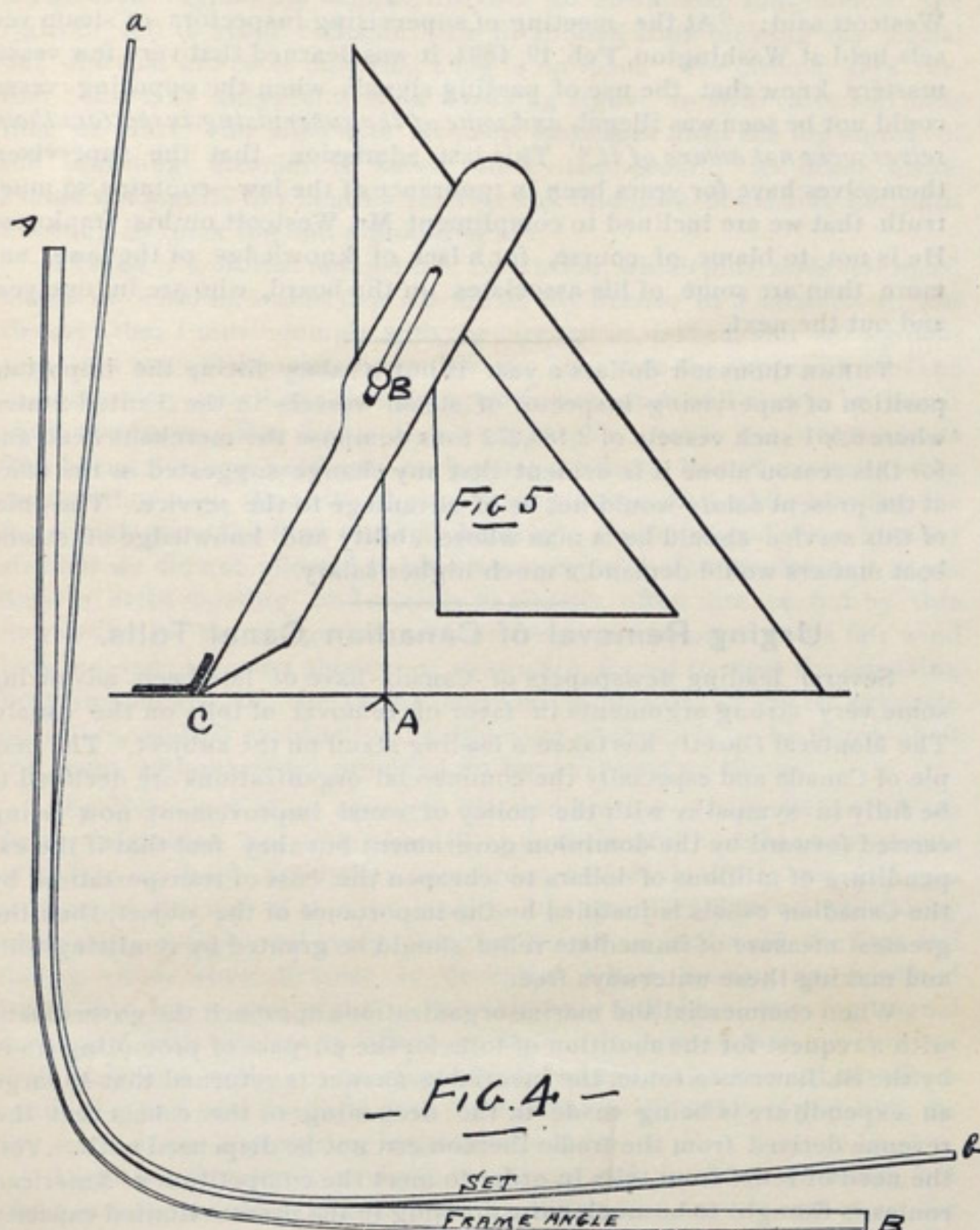


Ship builders who use the machine state that they effect a saving of cost therewith, and certain it is that it contributes to a great saving of time, as a frame may be beveled and set with one heat. It must, however, be borne in mind that the angle bars are somewhat elongated by the pressure between the rolls, and allowance must be made for this in setting off the rivet holes, if the latter are punched before the bars are beveled."

Adjusting the frame, Fig. 3, is the next operation. The frame angle is laid upon the scrive board to the line for which the frame was bent, and the bevel tested by a tool indicated in Fig. 5. In this figure A B is the distance between the frames; c is No. 6 frame and A No. 7, thus showing that the frame is correctly beveled the upper flange lying to the tongue B C. The floor plate A, brace d, futtock E and tail plate E', Fig. 3, are laid under the frame and the frame holes copied from it onto the components. A template is used for the girder bars D and the piece of reverse frame angle on the floor plate, the frame being laid upon the top side reverse frame and the holes copied thereon.

The shell landings, marked s, Fig. 1, are distinguished on the floor by paint marks, white or red showing the width of the lap. This width is marked upon the frame with a chisel, and when the frames are faired up a batten is clipped to the marks and the width of the shell plating corrected

Fig. 2 shows a mold of the kind used in the mold system, so prevalent in this country. This mold is made from the lines on the mold loft floor and carried to the slab, where the curve is drawn and the frame bent to the line, no allowance being made for the loss of curvature. The frame



The color of the tower at Pipe island station, Detour passage, will be changed about the 25th inst., from red to white, to render it more efficient as a day range with Frying pan island light house. With the same end in view, and about the same date, the color of the tower at Frying pan island light station will be changed from brown to white.

Cleveland's first fire boat, the J. L. Weatherly, was built nine years ago, and the wooden hull is already pronounced so rotten, upon examination by experts, that the fire department is advised to have the machinery transferred to a new hull. Faulty construction is the cause. Officers of the department who were loudest in sounding the praises of the boat when she was built are the first now to pronounce her worthless. As a matter of fact she has always been, aside from her pumping machinery, a fair sample of the results of public expenditures.

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The books of the United States treasury department contain the names of 3,761 vessels, of 1,261,067.22 gross tons register in the lake trade. The lakes have more steam vessels of 1,000 to 2,500 tons than the combined ownership of this class of vessels in all other sections of the country. The number of steam vessels of 1,000 to 2,500 tons on the lakes on June 30, 1893, was 318 and their aggregate gross tonnage 525,778.57; in all other parts of the country the number of this class of vessels was, on the same date, 211 and their gross tonnage 314,016.65. The classification of the entire lake fleet on June 30, 1893, was as follows:

Class.	Number.	Gross Tonnage.
Steam vessels	1,731	828,702.29
Sailing vessels.....	1,205	317,789.37
Canal boats.....	743	76,843.57
Barges.....	82	37,731.99
Total.....	3,761	1,261,067.22

The gross registered tonnage of vessels built on the lakes during the past five years, according to the reports of the United States commissioner of navigation, is as follows:

	Number.	Net Tonnage.
1889.....	225	107,080.30
1890.....	218	108,515.00
1891.....	204	111,856.45
1892.....	169	45,168.98
1893.....	175	99,271.24
Total.....	991	471,891.97

ST. MARY'S FALLS AND SUEZ CANAL TRAFFIC.

	St. Mary's Falls Canal.			Suez Canal.		
	1893.	1892.	1891.	1893.	1892.	1891.
No. vessel passages	12,008	12,580	10,191	3,341	3,559	4,207
Ton'ge, net regist'd	9,849,754	10,647,203	8,400,685	7,659,068	7,712,028	8,698,777
Days of navigation..	219	223	225	365	365	365

Entered at Cleveland Post Office as Second-class Mail Matter.

AGAIN it is quite in order to remark that the general agents of insurance companies doing business on the lakes make up a shrewd collection of men. There are not many of them, and they can reach agreements in matters pertaining to their business with less friction than would occur if their number was greater and their interests more diversified. Without commending their methods of arranging tariffs that do away with competition, it may not be out of place to compliment them upon having upheld rates this season as against reductions in all other lines except insurance. A break among the underwriters was certainly expected when the tariffs were first announced and when business was slow in beginning, on account of the large number of vessels remaining in ordinary. The expected scramble for risks failed to materialize, however, and instead of relinquishing their stand the underwriters have even gone further and insisted upon more stringent rules governing the settlement of losses. Barring an unusual number of losses during the season, they will make money, while managers in other branches of the lake business are straining every effort to come out even.

As noted in a letter from Eugene T. Chamberlain, United States commissioner of navigation, printed in a recent issue of the REVIEW, international correspondence on the subject of the recommendations of the International Marine Conference for preventing collisions at sea has now reached a point where it is expected that with a few slight modifications the regulations will be adopted by the maritime countries represented in the congress. It will be remembered that the regulations were adopted by the United States in the passage of the act of August 19, 1890, which act was not to go into effect, however, until the issuance of a proclamation from the president announcing that other nations had agreed to adopt the regulations. The principal change now desired is the repeal of Article 7, which applies to vessels in the fishery trade. Bills for the repeal of this article have been introduced in the house and senate and will meet with early approval, so that it is probable that the necessary proclamation from the president will not now be long delayed.

FROM the manner in which the officials of Cuyahoga county (Cleveland) are trying to enforce a system of double taxation upon vessel property, it is evident that in all matters pertaining to taxes vessel owners in Cleveland are to be subjected to a great deal of annoyance in court and probably in the end made to pay large sums of money, on account of laws

that have not taken into account the advantages of shipping to a community nor the injustice of taxing anything but the earnings of vessels. It would seem, then, that the proper course to pursue at this time would be to begin immediate preparations to take up the whole subject with the state legislature, with a view to exempting vessels from taxes, and this suggestion may be applied to other states on the lakes as well as Ohio. Older states—states with more experience in shipping matters—have recognized the wisdom of encouraging water commerce in this way.

IN AN interview published a few days ago, Supervising Inspector Westcott said: "At the meeting of supervising inspectors of steam vessels held at Washington, Feb. 19, 1894, it was learned that very few vessel masters knew that the use of passing signals when the opposing vessel could not be seen was illegal, and some of the supervising inspectors themselves were not aware of it." This last admission—that the supervisors themselves have for years been in ignorance of the law—contains so much truth that we are inclined to compliment Mr. Westcott on his frankness. He is not to blame, of course, for a lack of knowledge of the laws, any more than are some of his associates on the board, who are in one year and out the next.

THREE thousand dollars a year is not a salary fitting the important position of supervising inspector of steam vessels in the United States, where 6,561 such vessels of 2,183,272 tons compose the merchant fleet, and for this reason alone it is evident that any change suggested in the office at the present salary would not be of advantage to the service. The chief of this service should be a man whose ability and knowledge of steam-boat matters would demand a much higher salary.

Urging Removal of Canadian Canal Tolls.

Several leading newspapers of Canada have of late been advancing some very strong arguments in favor of removal of tolls on the canals. The Montreal Gazette has taken a leading stand on the subject. The people of Canada and especially the commercial organizations are declared to be fully in sympathy with the policy of canal improvement now being carried forward by the dominion government but they feel that if the expenditure of millions of dollars to cheapen the cost of transportation by the Canadian canals is justified by the importance of the object, then the greatest measure of immediate relief should be granted by remitting tolls and making these waterways free.

When commercial and marine organizations approach the government with a request for the abolition of tolls for the purpose of promoting trade by the St. Lawrence route, the invariable answer is returned that so large an expenditure is being made in the deepening of the canals that the revenue derived from the traffic thereon can not be dispensed with. Yet, the need of relief from tolls in order to meet the competition of American routes is thought to be much more pressing in the present limited capacity of the St. Lawrence canals than it is likely to prove when a draft of fourteen feet has been provided from Lake Erie to the head of ocean navigation. It is believed that four or five seasons will yet elapse before the larger class of lake carriers will be able to pass down to the ocean vessels at Montreal without transshipment at Kingston, and until then the Canadian route must suffer this disadvantage. The grain tolls, at the rate of 10 cents a ton, are not heavy, but it is felt that under present conditions of competition every fraction of a cent influences the comparative traffic of the Canadian and Erie canal routes; and the abolition of tolls is urged on all classes of products for the carriage of which the Canadian waterway is competing with that of New York.

It is stated that during the season of 1893 the quantity of grain from United States ports transhipped at Kingston was 12,603,305 bushels, showing an increase of 6,133,687 bushels, or nearly 50 per cent. over the preceding year. Shipments of grain from Montreal during the season of 1893 aggregated 21,770,636 bushels, against 17,943,105 bushels in 1892. Thus it will be seen that the trade was increased substantially, and the whole of the gain was made in through shipments by lake vessels from American ports.

The Gazette warns its readers, however, that this substantial increase does not mean an actual gain in competition with the Erie canal, that route having made as large a relative gain for the year, and this increase having attracted attention to the importance of maintaining the efficiency of the Erie canal. It concludes as follows:

"It is evident, therefore, that the Americans do not intend to permit Canadians to wrest any part of the carrying trade to the seaboard from them without a struggle. As we have remarked, the ups and downs in the quantity of western grain down the St. Lawrence are governed now principally by the two factors, railway rates and the export surplus, no real headway having been made against the Erie route, and if the people of New York press forward their projected improvement of that canal, the difficulty of competition already experienced by Canadian carriers will be intensified. A free water way is the true policy for Canada, and the government would, we believe, strike the popular chord and elicit popular applause by adopting such a course."

A Characteristic Letter from Capt. John Lowe.

The following letter from Capt. John Lowe to Capt. Wm. Mack, on the subject of the recent circular from the supervising inspectors of steam vessels regarding the use of passing signals in fog, will be read with considerable interest by vessel masters on the lakes. It is truly characteristic of the writer:

MY DEAR SIR.—Upon receiving my yearly license to sail a steamer on the northwestern lakes, I also received a circular from the local inspector, to the effect that when in fogs, mist or falling snow, when sight is obscured beyond too short a distance for steamboat movement to the right or left to avoid collision, I am prohibited from blowing any signal but one that indicates only that a fog is on hand. The circular says further "that it is unlawful to blow a passing signal" in such cases and adds that we must "run slow with frequent stoppages until the fog signal of the opposing steamer is heard abaft the beam." In other words I must not signify to a coming steamer any intention of evading her until I see her in thick fog and a tumbling sea.

I asked if a protest against the resolution, which puts aside all usual means of evasion, would deprive me of my license as a master. It was thought that I must comply with the circular as issued, and so, my dear captain, I am afloat amenable to this new law, with the supposition of the inspectors my only hope that the opposing steamer will always be heard abaft the beam. You know that a supposable case is not necessary, as fogs bring steamers head onto each other on direct line of course as often as any other way. Does it not seem strange, then, that while blowing the fog signal provided for a tow and hearing a similar signal from another steamer we are not allowed to blow a passing signal? We know it is our duty to avoid meeting, and anxiety to clear is often intense, but by this new device for fog navigation, with its frequent stoppages and a fair wind blowing our consorts abreast of us, we are forced to meet the opposing boat in a cluster, or vice versa; and out of all this we are to extricate ourselves, so that eventually the opposing steamer is to be heard abaft the beam, without means provided for her ever getting there.

We live a sort of an agitated life, and hope is a large factor in a sea-faring existence. No matter how ill or unsuccessful have been the events of today, we hope for better tomorrow, and it looks to me, taking a philosophical view of this innovation in a circular, that we should lay aside every weight and every fear that besets us, and amid the fogs and falling snow, when distance is deceptive, when hearing has resolved itself into hope, and sight is horrible, we will blow our fog signal only, and with stoical indifference hold our course, fast or slow, or drift on it, and without a passing signal call the man a coward who fears collision; and you may add your McDuffian qualification if you like, for the spirit of our supervising inspectors is in it.

Light is necessary to navigate in narrow and intricate channels, but sight in a fog is too serious to permit. When our tow is not seen for hours together in the day, and when often for a night her lights are invisible, to persist that we must see the oncoming steamer seems to me somewhat fanatical. One would think that these law makers were brought up on the shores of a drawing room aquarium. It looks like a well laid plan to get the vessels together in a rolling sea, and you know what that means. It is too much to expect that passenger steamers will lose their trade by the rulings of this circular? Who on earth would send his loved ones on a boat deprived of the means to evade collision because the weather had changed? There is no reasonable excuse for stopping a boat in a fog, unless for dangers due to shoals and narrow water. To lay by in the spring fogs and in the fall snow, on account of fears of collision, would add greatly to the cost of transportation. Steamers advertising for patronage in the passenger or excursion business should be compelled to attach this resolution to hand bills and posters and it should also be printed on all tickets for passage. I would like to have you quietly ascertain whether a life insurance policy becomes vitiated wholly or in part on account of this circular. There are serious objections to risks on hereditary suicides, and there must be little inclination among our friends in the underwriting business to take risks on such chances for wholesale loss of humanity as this circular provides for.

You have without doubt noticed the amendments to rules 1, 2 and 3. They give the up-bound steamer the privilege to blow first blast for the side of the river or lake she desires to take. Then they give the down-bound boat the right to differ entirely with the up-bound boat's whistle, and he blows a succession of whistles meaning "I can't do it." Then the upward-bound boat blows a lot of blasts which means "what do you want." Again the down-bound fellow blows for his side and the up-bound boat blows in answer and takes the side given her by the other steamer, the latter somewhat disturbed or chagrined that he started the fracas which caused disturbance and confusion, waking up all his passengers if at night, and bringing a cloud of witnesses to the shores if it happens in the rivers by day. Why not give right of way to the down-bound boat at once?

It would seem that the supervisors found it impossible to get all this racket to work in fogs, so we get past each other with a clatter of blasts

in the clear weather and they give us one of the most ticklish jobs imaginable to accomplish in fogs, mist and snows.

The misuse of the whistle, as the inspector terms it, has been the means, these long years, of saving life, enriching the owners of property afloat and securing to thousands a livelihood in greater security. If it is a misuse to blow a passing signal in a fog, it is equally a misuse use of the whistle to blow a fog signal in clear weather. The inspector who sees that maritime interests are handicapped by two whistles alike and refuses to assist in giving to the seas a distinctive fog signal for single steamers, and also by some law of his own sees a misuse of the whistle signals because the weather has changed, and desires to experiment on steamers passing in dense fogs without using a passing signal, as is used in clear weather, is a dangerous person. Why not give us that noisy succession of whistles in fogs to indicate where we are, that they so freely ask to be blown in clear weather, and with which we discuss the question of sides with whistles for miles before we meet? Is it not time this single toot for a fog signal should cease? To port our wheel this same signal is used. Is this the point the supervisors had in mind when they abolished passing signals, and now compel us to meet by law but get past each other contrary to expectation?

Barring the resemblance of a passing signal to a fog signal, there is no possibility of misuse with the passing signals in fogs, mists or falling snow. The pilot rules are plain, so that the sea-faring man though a fool need not err therein. This circular puts an end to sense in thick-weather navigation, and disaster is entailed on its enforcement. I give you these few ideas drawn from a plain construction of this late resolution, and should like very much to hear anything in the way of different construction. Many of our "old heads" after long years of toil on the waters are passing away peacefully at home, but he who persists in following up the instructions of this circular will most likely die with his boots on aboard.

JOHN LOWE.

Miscellaneous Mention.

Trial of the battle ship *Indiana* has been postponed and will probably not take place for several months to come.

The programme of excursions planned for the Northern Line passenger steamer *North West* at Buffalo Cleveland and other places, before starting on her first regular trip June 5, will begin at Buffalo with the close of the present week. On the run from Cleveland to Buffalo, Sunday, there was no effort to exceed the speed attained on the trial trip, of which an account was printed last week. An engine speed of about 106 revolutions was attained, and as on the first trial the machinery was operated without a stop and without difficulty of any kind.

An electrically lighted life buoy has been invented by Capt. Melter, and some trials were lately made with it at Kiel on board the German war vessel *Worth*. The buoy was thrown overboard when the vessel was proceeding at a speed of about sixteen knots, and for about twelve seconds it was lost in the eddy current caused by the twin screws of the vessel, but then reappeared. It is stated that the experiments resulted so successfully that it is probable the new life buoy will be adopted generally in the German navy, and there seems no doubt of its being found of great value at night time.

Capt. Charles H. Westcott, supervising inspector of steam vessels in the eighth district, with headquarters at Detroit, has been asked to resign. His appointment was due to strong support from vessel owners in Detroit Cleveland and Buffalo, and these owners would try to secure his retention, but for the apparent impossibility of retaining a Republican in the position. Candidates for the position are: John H. Galwey, Michael B. Kean, William M. Daily and Charles H. Westcott (for retention), Detroit; Elwin J. Thomas, Frank Lawler, Jonah R. Taylor and William J. Hackett, Chicago. The Lake Carriers' Association has asked for the appointment of a vessel master to the position, and has entered strong protest against the appointment of John H. Galwey.

Speed and Cargo Records.—Lake Freight Boats.

Iron ore: *Maritana*, Minnesota Steamship Company of Cleveland, 4,260 gross or 4,771 net tons, Escanaba to South Chicago; *S. S. Curry*, Hawgood & Avery Transit Company of Cleveland, 3,852 gross or 4,314 net tons, Escanaba to Fairport.

Grain: *Selwyn Eddy*, Eddy Transportation Company of Bay City, 139,820 bushels of wheat, Detroit to Buffalo; *Centurion*, Hopkins Transportation Company, St. Clair, Mich., 147,812 bushels of corn, Chicago to Erie; *Onoko*, Minch estate, Cleveland, 187,657 bushels of oats, Chicago to Buffalo.

Coal: *E. C. Pope*, Eddy Bros. of Bay City, 3,950 net tons anthracite, Buffalo to Chicago.

Speed: *Owego*, Union Line of Buffalo, Buffalo to Chicago, 889 miles, 54 hours and 16 minutes, 16.4 miles an hour.

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Around the Lakes.

Shipments of ore from two harbors already amount to about 120,000 tons.

Joseph A. Redington, who was in years past one of the leading owners of vessel property on the lakes, died at his home in Cleveland last week. He was in his seventy-fifth year.

Montreal vessel men are pressing upon the dominion government to open the Welland canal on Sunday up to 6 a. m. and after 9 p. m., the same as last season. There is strong opposition.

Connell Bros. of Oswego will shortly have in operation a new tug built for them by Buffalo parties. The boat has been named W. & J. Connell. She is 70 feet over all, 15 feet 6 inches beam and 9 feet hold and has an engine 19x19 inches.

Geo. F. Williams and Capt. John Mulholland, surveyors on the steamer City of Cleveland of the Bradley fleet, which was ashore in Lake Michigan a couple of times last fall, and which is now at West Bay City for repairs, have fixed the damages at \$12,500.

Another wooden boat, the barge Pewabic, built by Alex. Anderson at Marine City for N. & B. Mills of Marysville, Mich., was launched Saturday. She is 241 feet keel, 41 feet beam and 22 feet hold, and is engaged to tow with the steamer Gogebic on an iron ore contract.

Capt. Sidney J. Millen's nomination for the position of local inspector of hulls in Detroit is highly pleasing to vessel owners in all parts of the lakes. Confirmation of the nomination is assured. Capt. Millen is a son of James Millen of the firm of Parker & Millen, Detroit. He sailed for eighteen years and was for five years master of lake vessels.

The steamer building at the yards of the Chicago Ship Building Company will be called the Kearsarge, in memory of the wrecked war vessel. The last shipments of parts of her engines, which were built by the Cleveland Ship Building Company, are being made now, and the boat will be ready for launching in a few weeks. It is hoped to have her in commission in July.

Congressman Haugen of Superior is at all times watchful in Washington for the interests of shipping at the head of the lakes. Although late in securing the passage of a bill for a fog signal at Superior, he will probably succeed in providing an appropriation for it in the senate before the civil sundry appropriation bill passes that body, and upon favorable action in conference the fog signal can be constructed for next season.

Admiralty Matters.

Although the new appellate court, or circuit court of appeals, is ordinarily looked upon as a court of final jurisdiction in admiralty cases, there are conditions under which a review of judgment may be had in the supreme court of the United States. Take, for instance, the controversy between the collector of the port of New York and Frederick W. Vanderbilt, over the importation of the steam yacht Conqueror. This case will be decided in the supreme court of the United States, the petition of the solicitor general for a writ of certiorari having been granted by the higher court to review the judgment of the court of appeals for the second circuit in the matter. The yacht was brought into the United States Aug. 27, 1891, having been bought at Glasgow, Scotland, for £15,500. The New York collector seized the vessel to enforce the payment of import duties. The United States district court, New York, decided that the yacht was not an imported article liable to duty, and she was ordered restored to Vanderbilt by a decree which also awarded him actual and consequential damages for her detention in the sum of \$20,784. This judgment was affirmed by the circuit court of appeals.

The opinion of the United States circuit court of appeals at Cincinnati in the North Star-Sheffield collision case is not as yet in print. It was read from the bench, and even the attorneys in the case were not given a copy of it, as the court was desirous of revising the phraseology of some parts of it. The interest, which the court did not allow to the owners of the Sheffield, is quite a large item, but it is not known as yet whether any further steps will be taken with a view to securing payment of interest. It is understood that the North Star was not at the time of the collision insured against collision liability.

United States District Judge Swan, Detroit, on Monday handed down a decision in the Japan-Whitaker collision case. The steamers collided in Lake Huron, Sept. 18, 1891. The Japan is held to have negligently gotten off her course and judgment was rendered against her. The schooner Hunter Savidge was also held in fault for having sunk the Minnie Davis off Bar point, Nov. 15, 1891.

CHANGE OF TIME.—May 20th the Nickel Plate road will change time. The new summer schedule will afford the same number of trains as at present including through sleeping car service between Chicago, Cleveland, Buffalo, New York and Boston. The improvements will embrace the shortening of the time of some of the through trains between Buffalo and Chicago.

Questions from a Landsman.

Editor MARINE REVIEW: I am a landsman and I am ignorant of all matters pertaining to shipping. There are two questions I wish to ask, and if not encroaching too much upon your valuable time a short answer to each will be greatly appreciated. The questions are:

1. Are the sides of ships, as far up as the surface of the water, free, or comparatively free, from projections, such as bolt heads, that might stand out beyond a smooth, or nearly smooth, surface? I mean from the keel up on each side of the ship to the surface of the water when the ship is carrying her maximum load.

2. Are rope ladders, such as are used on ship board, made on board the vessel, or are they made elsewhere? Or, in other words, do sailors ever have occasion to make rope ladders when on a voyage?

Prophetstown, Ill.

WALTON DUANE SMITH.

[An even surface is necessary in all ships below the load water line. In steel ships, which are now the ships of the world, the skin or outer plates are placed together edge and edge, and riveted to what are called butt-straps on the inside. Where the butt-strap method is not followed the plates are lapped, but the edges are beveled so as to overcome resistance, and rivet heads are cut and hammered to a smooth surface on the outside. Wire or cable rigging has taken the place of rope almost entirely aboard ship, and only in ocean going vessels making long trips are sailors now engaged to a limited extent in such work as making rope ladders, etc.—ED.]

In General.

Webb's Academy and Home for Ship Builders at Fordham Heights, New York, was formally opened on the 5th inst., and the venerable philanthropist, William H. Webb, was highly honored in the ceremony attending the dedication.

Mars and Jupiter are the names selected for the latest British battle ships. Six second-class cruisers, also contracted for recently, are to be named Venus, Diana, Dido, Isis, Juno and Doris. The list of torpedo boat chasers under contract from the admiralty now numbers forty-two, each of about 1,000 tons displacement.

One year's service has been completed by the Campania and Lucania and their several logs show by careful compilation that the former averaged 20.304 knots per hour, while the Lucania averaged 20.394 or .086 of a knot more than her sister ship. The actual gain in speed over all other vessels of these monster steamships is 1 1/4 nautical miles per hour.

John Jacob Astor, who is interested in electricity, has given a contract for an electric launch 90 feet in length. The craft will be of steel handsomely equipped in every way. Mr. Astor has been experimenting a long time at Rhinebeck-on-the-Hudson. The two boats he possesses are charged at his own dock with electricity manufactured by himself. Mr. Astor believes that the application of electricity as a motive power to boats has reached a point where it can be utilized to advantage in a good sized yacht.

In 1852 the legislature of New South Wales advertised a bonus of 6,000 pounds to be granted to the first company that should bring Sydney within a "course of post" of 120 days with London, which meant sixty days each way. The same legislature is now proposing to subsidize a line of steamships in connection with the Canadian Pacific Railway which shall bring Sydney within a "a course of post" of seventy-four days with London. Thus the time of travel to the uttermost parts of the earth is reduced nearly one-half in forty-two years.

Y. P. S. C. E. SOUVENIR.—An edition of the souvenir maps of the Y. P. S. C. E. Convention to be held July 11th to 15th at Cleveland O., has been issued to the Nickel Plate road, the shortest through passenger line between Buffalo and Chicago. Any person who expects to attend this convention and desiring one of these maps can have same forwarded to his address, free, with the compliments of this popular low rate line.

Requisition should be made on the advertising department of the Nickel Plate road, Cleveland, O., B. F. Horner, General Passenger Agent.

H. A. Rogers, general passenger agent of the Cleveland and Buffalo Transit Company, has just issued a neat souvenir descriptive of Buffalo, Cleveland and Niagara Falls. About June 1 the steamers of this line will begin running to Beach Park (Lorain, O.), and the trips will continue three times a week during the summer months. Numerous inquiries already received from Sunday schools and societies desiring to take a day's outing at the park indicate that the excursions will be even more popular this year. Beach park is only two hours ride from Cleveland, giving the excursionist four hours on the grounds. The \$3 Saturday-night excursions to Niagara Falls will also be resumed early in June. This trip allows the entire Sunday for sight-seeing at Buffalo and the Falls, returning home in time for business Monday.

SEND a postal card to B. F. Horner, G. P. A., Nickel Plate, Cleveland, O., for "Summer Outing" for information where to go to picnics.



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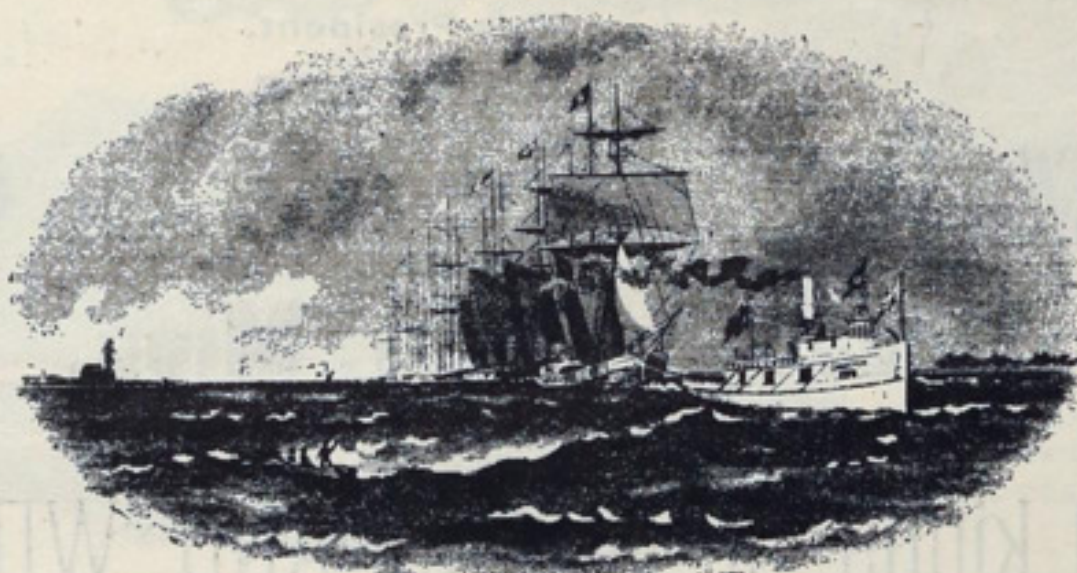
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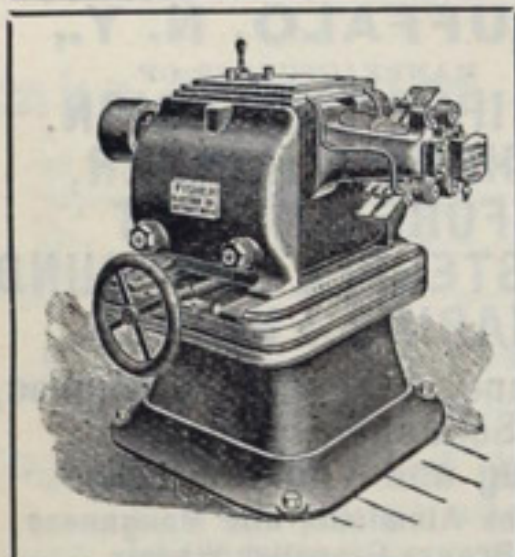
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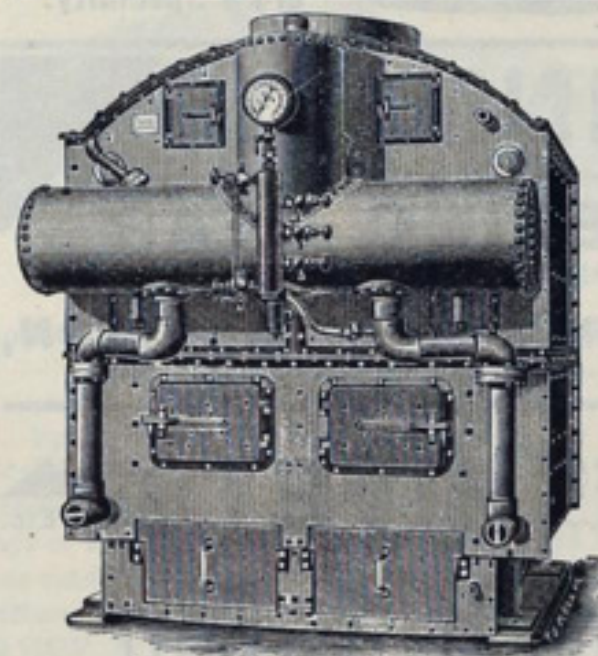
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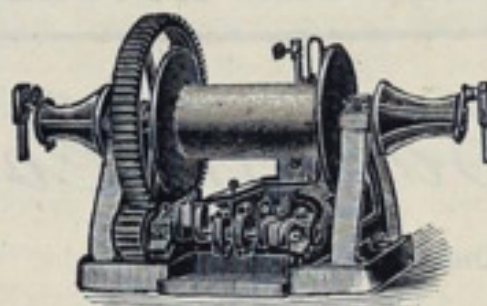
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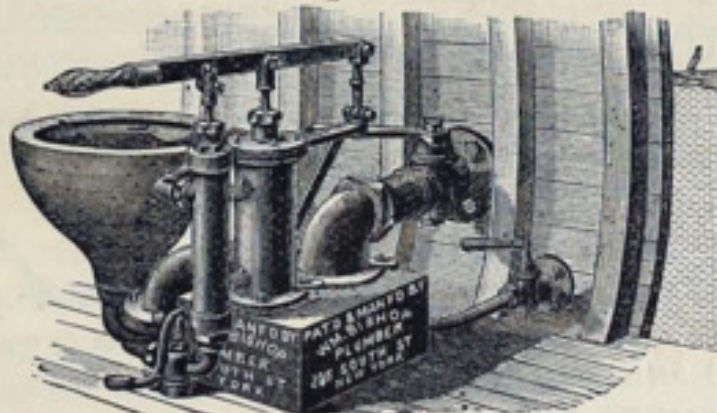
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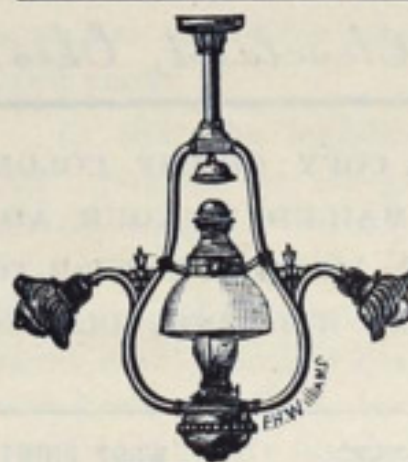
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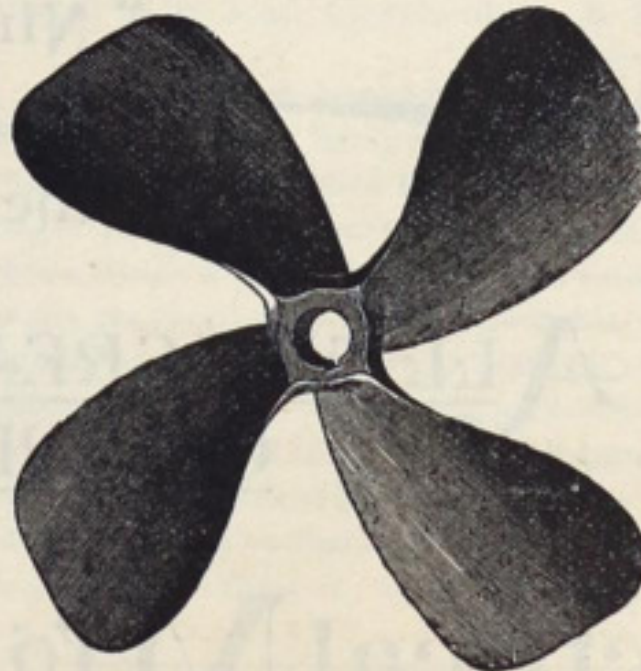
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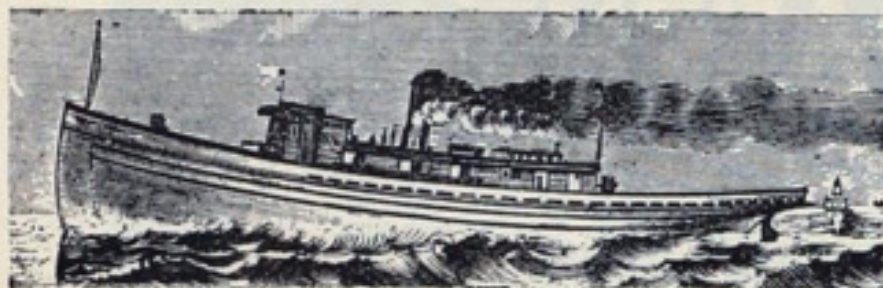
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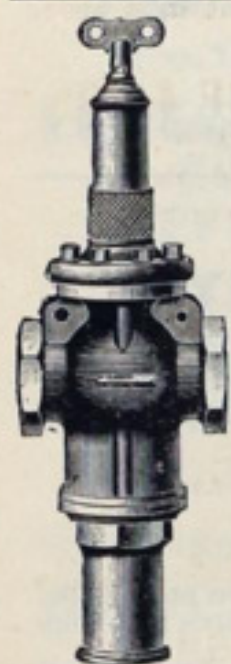
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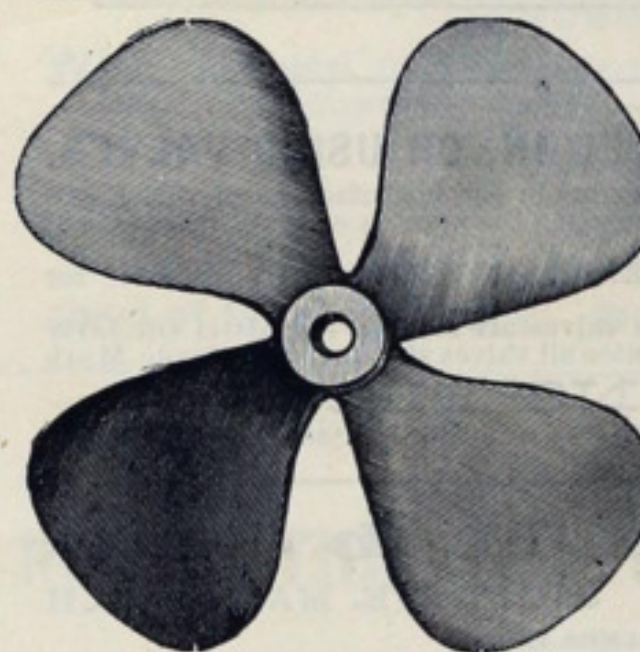
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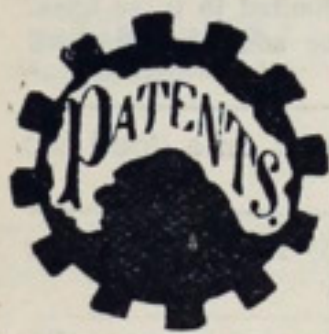
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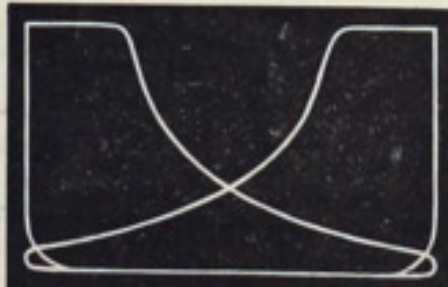
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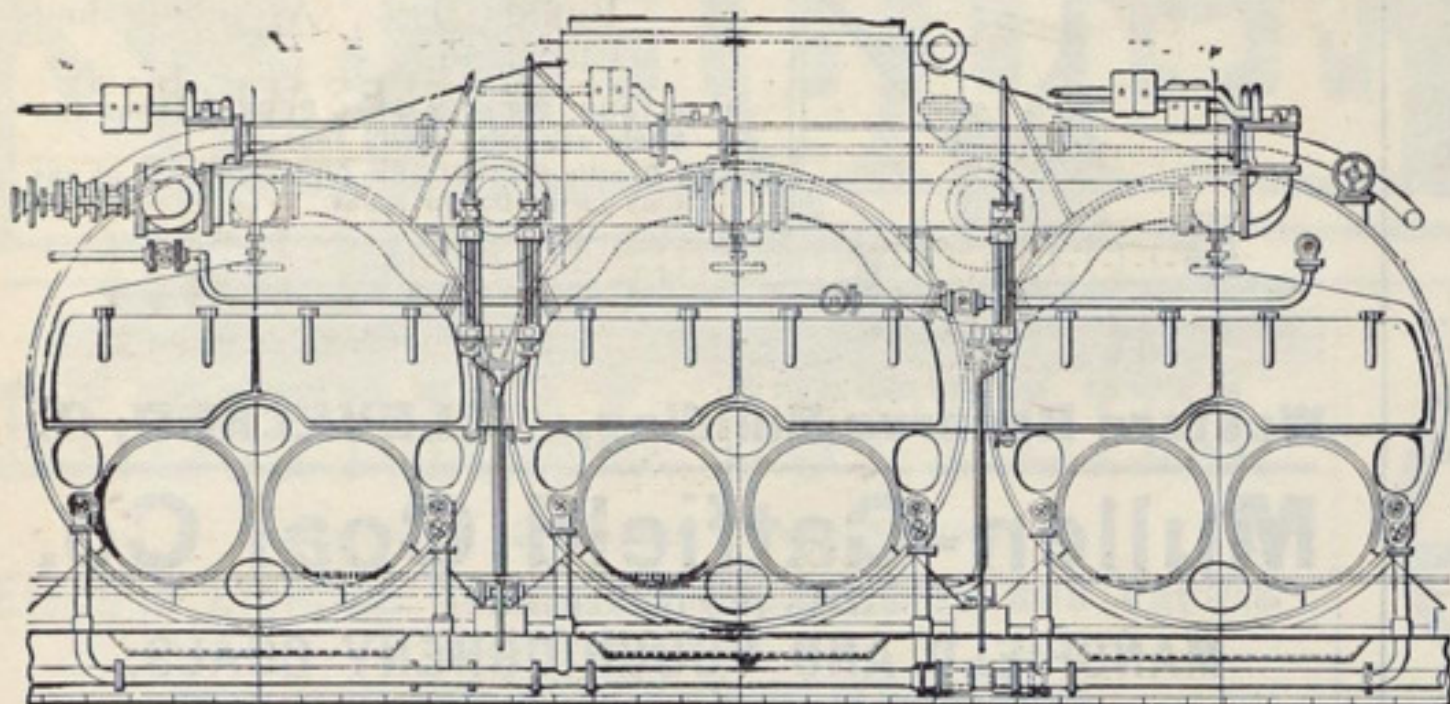
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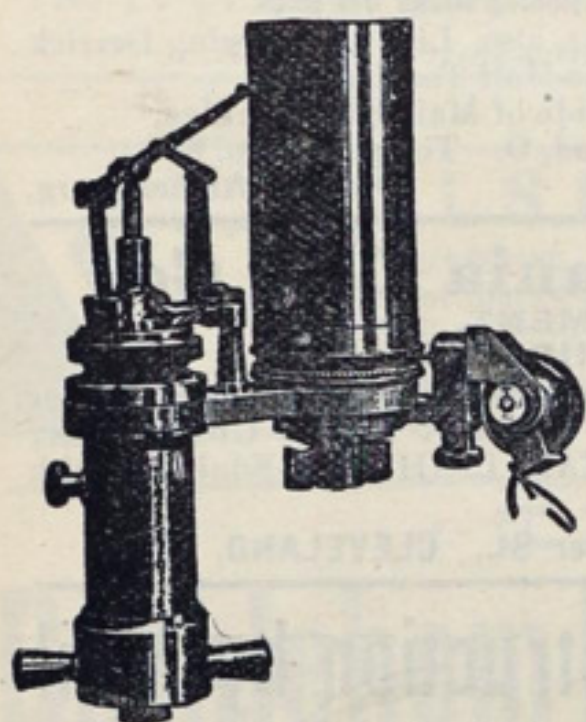
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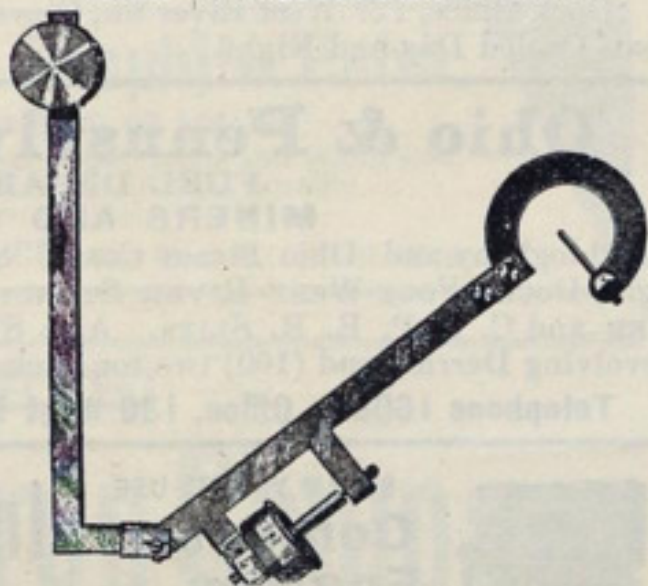
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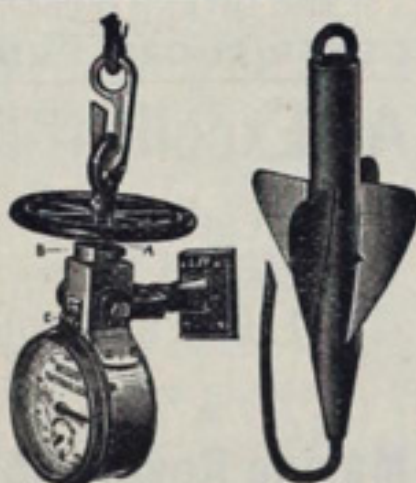
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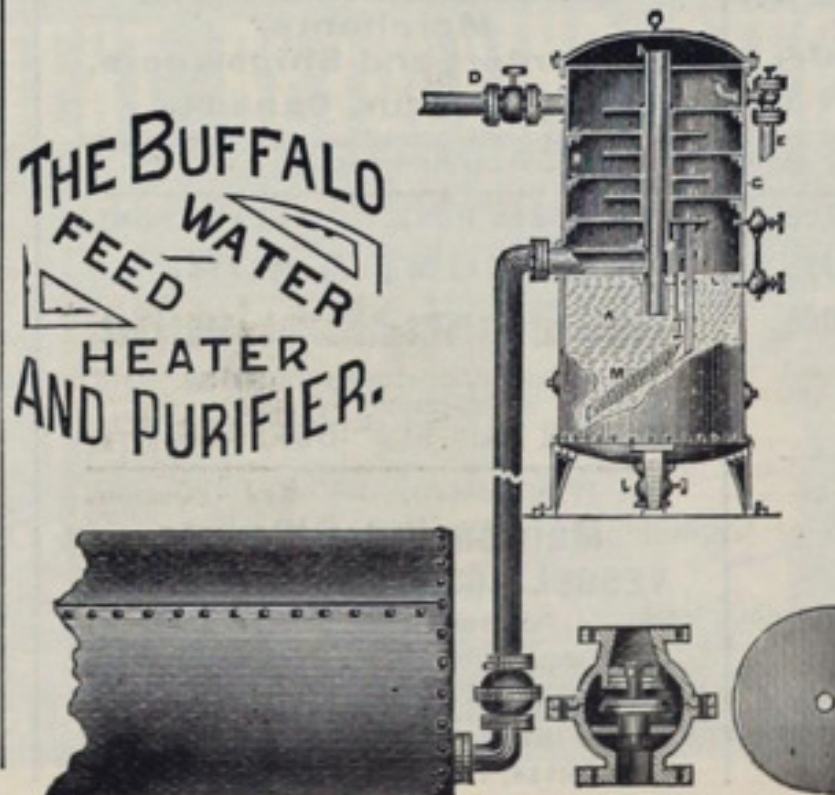
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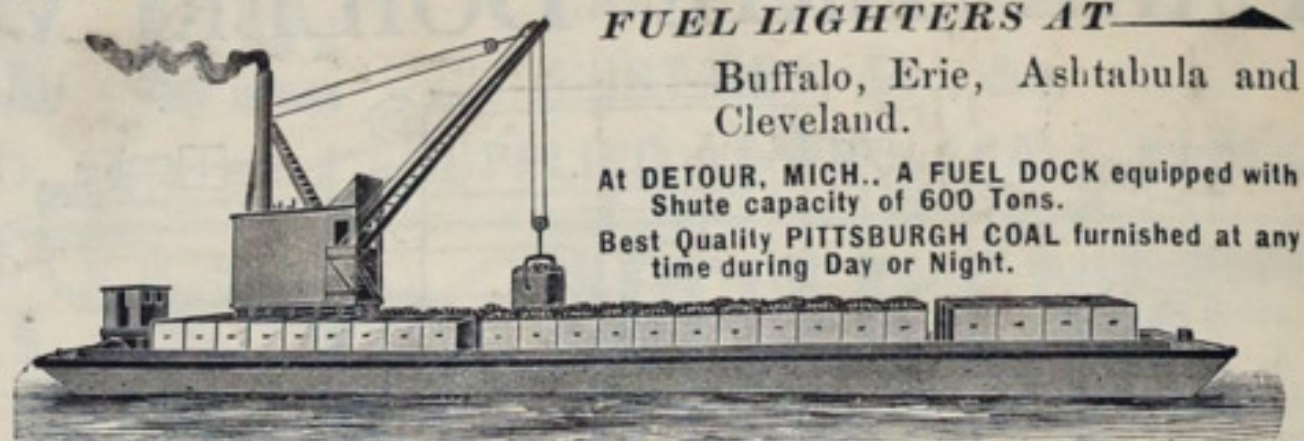
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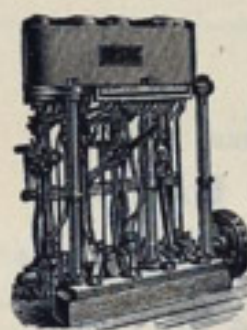
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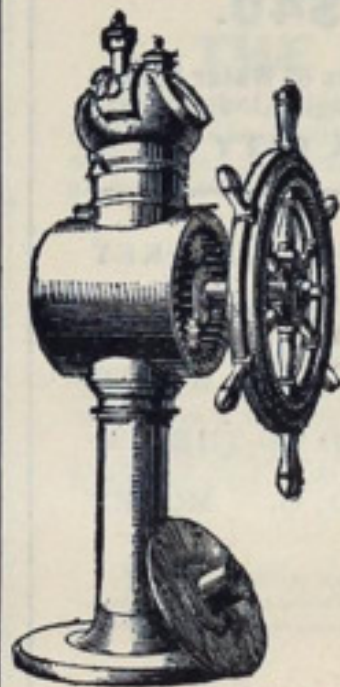
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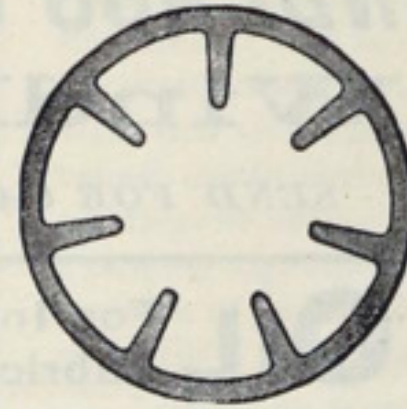
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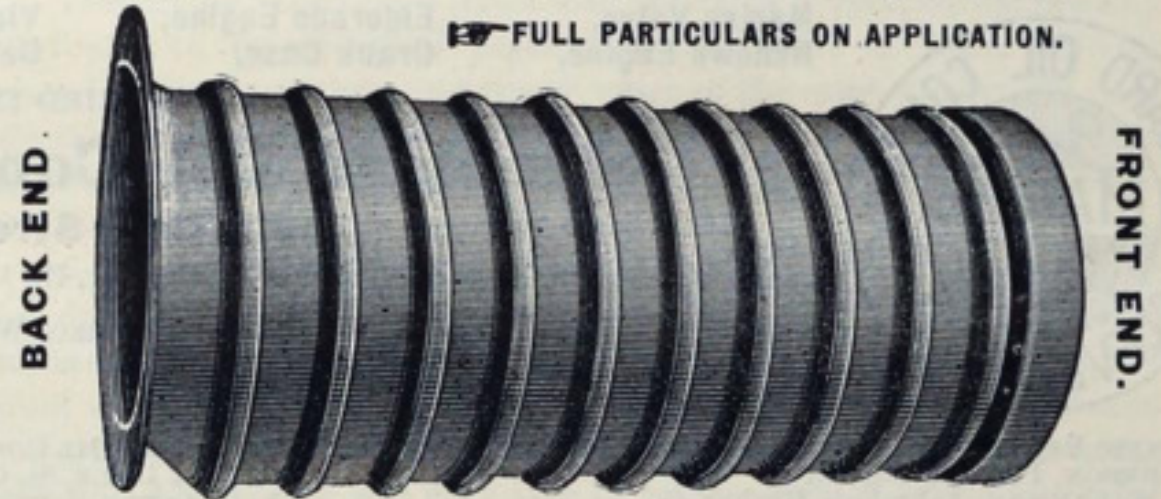
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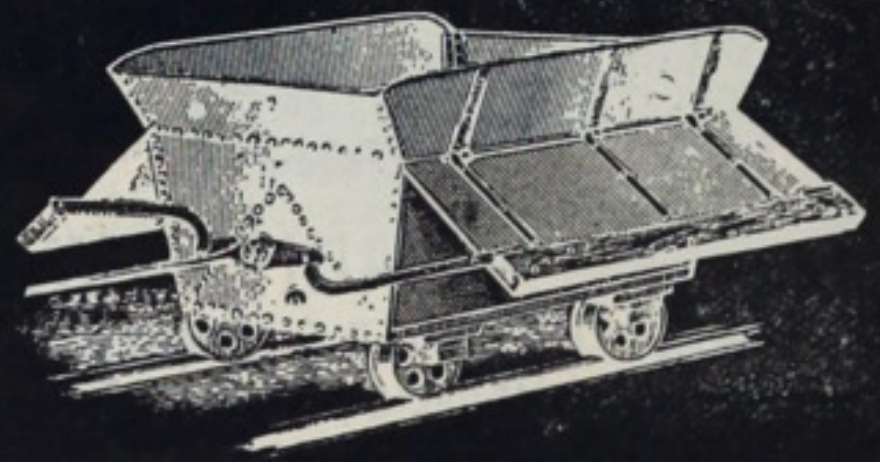
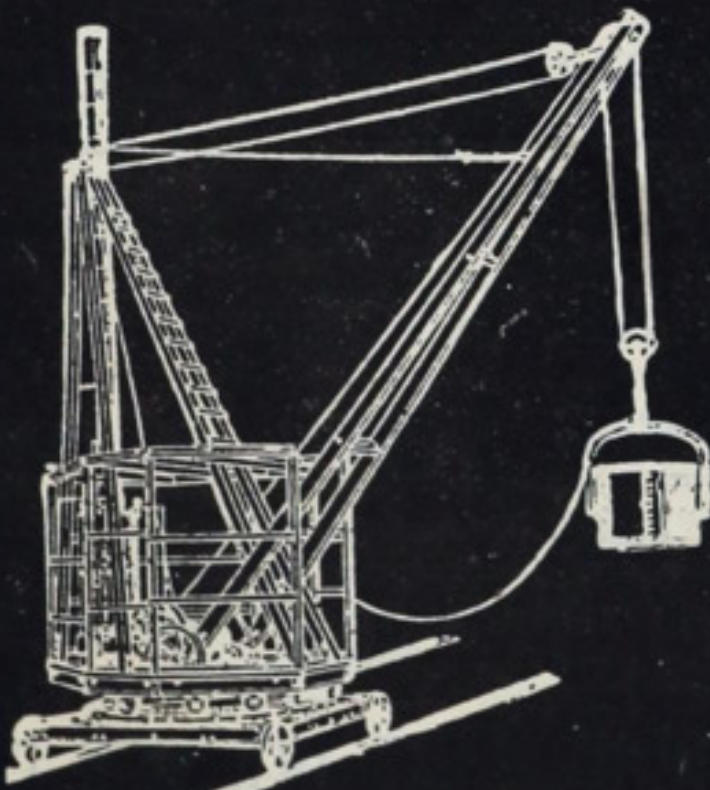
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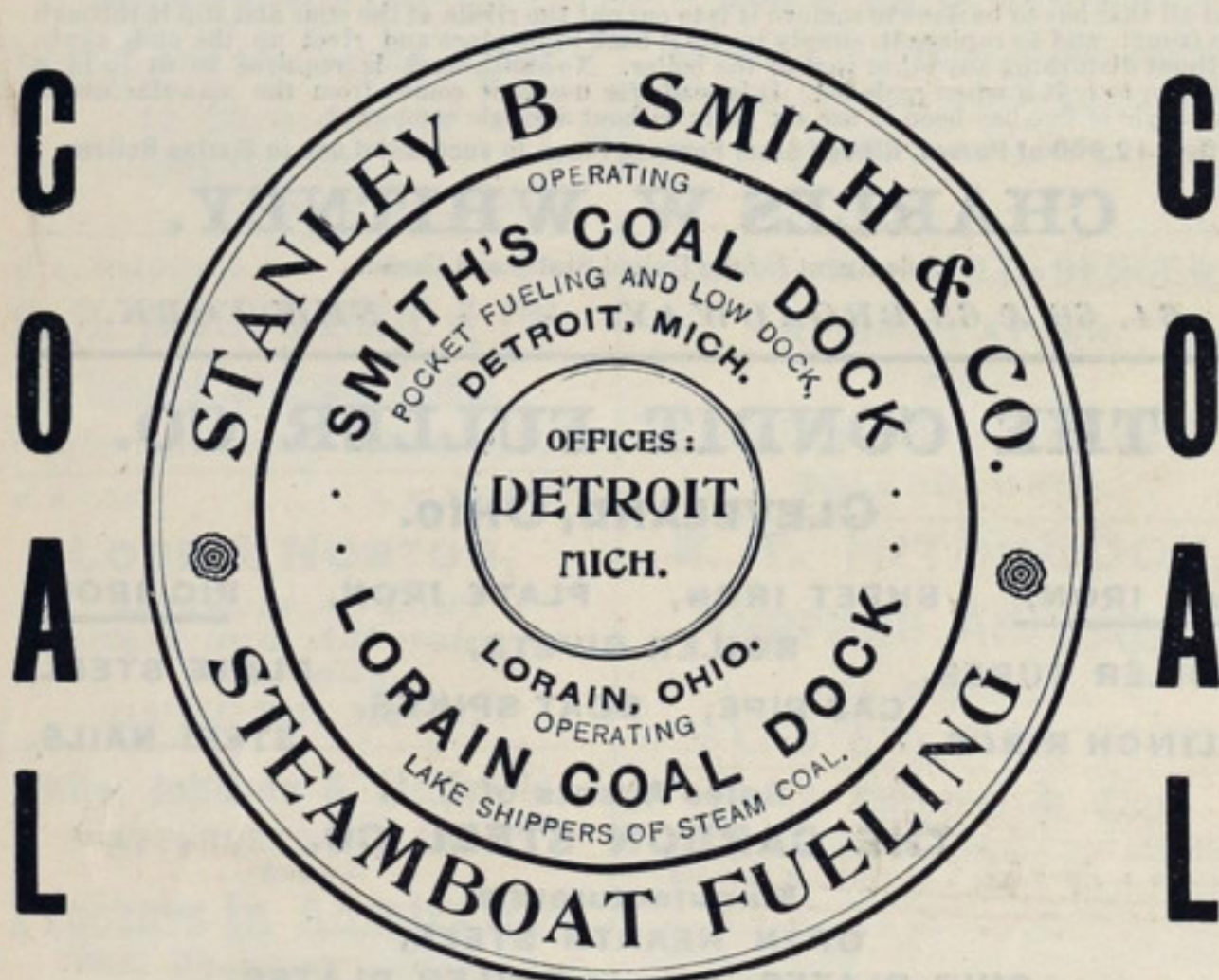
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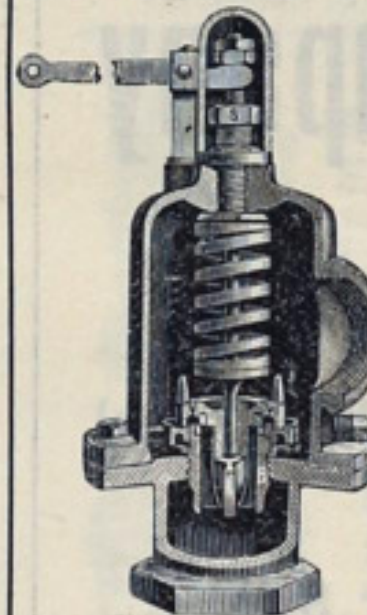
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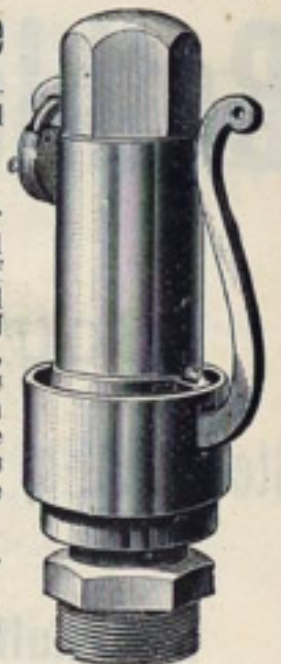
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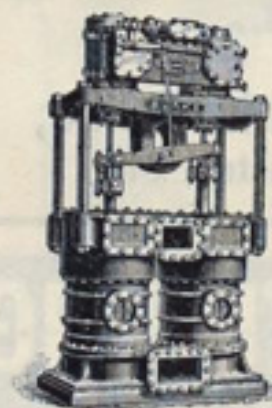
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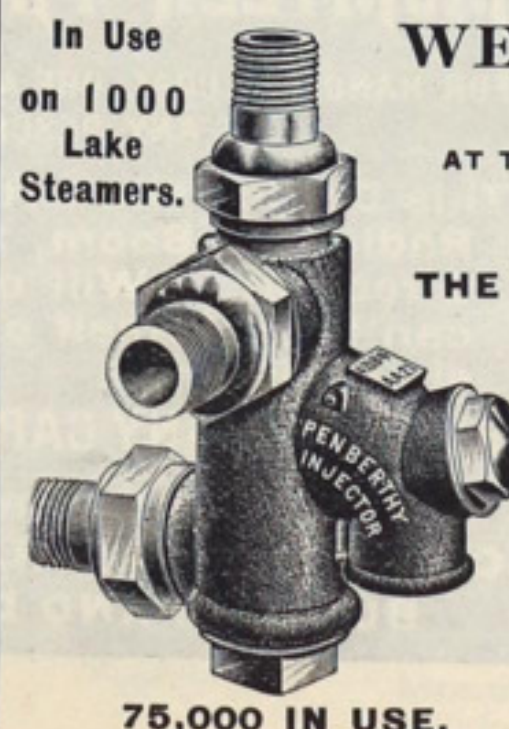


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